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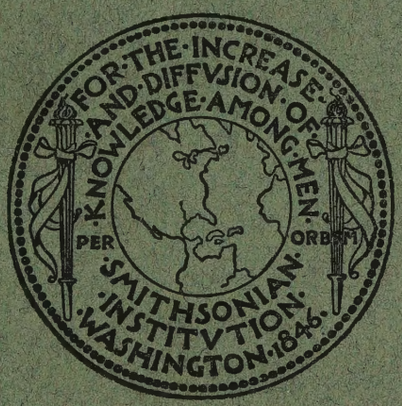

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PORTO RICAN STONE COLLARS AND TRIPOINTED IDOLS

BY J. WALTER FEWKES

INTRODUCTION

Before their discovery the aboriginal inhabitants of the West Indies had developed a culture which was peculiar, and only distantly related to that of the mainland of America. The peculiarities of this culture are indicated by characteristic stone objects, the geographical distribution of which determines its boundaries. The centers of this peculiar Antillean culture were Porto Rico and Santo Domingo, but its influence was felt more or less strongly throughout all the West Indian islands.

Porto Rico has furnished the student of prehistoric life two distinctive types of polished stone objects, one of which is commonly called the stone collar, the other the tripointed idol. We occasionally find representatives of these types on the neighboring islands, but as they never occur in such abundance nor so elaborately made as those of Porto Rico, we are justified in regarding them as having originated on the latter island.

While it is difficult to enumerate the stone collars of Porto Rico, there is no doubt that the number collected on that island exceeds that of all the other Antilles. The Latimer collection in the National Museum at Washington had originally thirty-five specimens. A few have been taken from this collection, but fourteen have been added to it by my expeditions of 1902–1903. The American Museum of Natural History in New York also has many stone collars, including six complete specimens and several fragments, mentioned in the catalogue of his collection by Dr. Stahl.[1] Many of the European museums, as those in Copenhagen, Berlin, Paris, London, and Salisbury,[2] also have specimens of Porto Rican stone collars. In the Madrid Museum there were three, which, according to Navarette, were presented by Don Cecilio de Lara y Castro of Badajoz, and there are several in private hands in Porto Rico and in Europe.

[1] *Los Indios Borinqueños, Estudios Etnográficos;* Puerto Rico, 1889.

[2] See Stevens, *Flint Chips, A Guide to Prehistoric Archæology as Illustrated by the Collection in the Blackmore Museum, Salisbury;* London, 1870.

Possibly there are altogether a hundred specimens the ownership of which is known.

Few of these objects have been found in the other West Indian islands; none has been reported from Cuba and Jamaica, the Bahamas have not yet yielded a single specimen, and they are likewise unknown from the coast of North or South America. I have seen stone collars said to have been found in Santo Domingo, and other authors mention their occurrence on that island. In his account of the Guesde collection, Professor Mason[1] figures a collar "from Santo Domingo probably obtained in Porto Rico," and one or two stone collars are reported from this island by others. It is instructive to note, in view of their geographical distribution, that the recorded localities of known Dominican specimens are from the eastern or Porto Rican end of the island.

A few of these objects have been recorded as from the Lesser Antilles, but I have seen none in local collections on St. Kitts, Barbados, Dominica, Grenada, or Trinidad. Pinart,[2] after mentioning several specimens from Porto Rico and Santo Domingo, reports one each from St. Lucia and Dominica. No reference to stone collars from the Lesser Antilles occurs in Mason's catalogue of the Guesde collection.

Stone collars are found in Mexico and Central America, but I find no authority for the statement that those of the Porto Rican type occur on the mainland. In his comments on Dr. Stahl's statement[3] that these collars have been found in Mexico, Sr. A. Navarette[4] writes that none of them is in the National Museum at the City of Mexico, and that they are not mentioned by Chavero, who has described at length the stone objects of that republic.[5] As Dr. Stahl suggests, the stone collars in the Lesser Antilles were probably carried there from Porto Rico by the Caribs, and were not made by the inhabitants of those islands. Navarette thinks that the same people may also have carried these objects to Mexico, if we accept the statements that they occur in that country.

[1] *The Guesde Collection of Antiquities in Pointe-à-Pître, Guadeloupe, West Indies;* Smithsonian Report, 1884; reprint, 1899, fig. 199, p. 827.

[2] *Note sur les Petroglyphes et Antiquites des Grandes et Petites Antilles;* Paris, 1890, p. 12.

[3] *Los Indios Borinqueños,* p. 45.

[4] *Estudios de Arqueologia de Puerto Rico. Resultados de una excursión cientifica,* VI. The newspaper *Aguila,* Ponce, 1904.

[5] Many Mexicanists have described stone yokes and stone collars which differ in details from those of Porto Rico. Whether or not there is any relation between the two is yet to be investigated, but the resemblance in general form indicates some connection.

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Collars are said to have been found in caves, but thus far we have no reliable information on this point, and no one has yet recorded an account of their association with other aboriginal objects in such places. I have fully investigated many of the stories regarding the cave origin of these collars, but have found them always to be based on hearsay. A reliable man at Ponce informed me that he had seen two of these collars in a cave and that they were lying side by side and luted to the floor. Between them, according to his account, there was a tripointed stone, and back of them was a low, artificial banquette. I have not myself found collars in caves, but the persistency of testimony that they occur in such places, as well as the fact that caverns were formerly places of worship, is evidence that these objects sometimes occur therein. Porto Rican shell-heaps, of which several have been explored, have thus far failed to yield a specimen of stone collar. These objects are generally plowed up in the fields or are brought to light by chance excavation in unexpected places.[1]

The technique of both the collars and the tripointed stones is among the best known to the student of aboriginal American stone art, and it is remarkable that man was able to cut and polish hard stone so skilfully without the aid of iron implements. In both types there are some specimens the surfaces of which are almost as smooth as glass; while on the other hand many are roughly made, showing signs of the instrument used in pecking. Evidences of erosion are found on the surfaces of several, some of the most common of which are made of a kind of breccia in which the harder, angular, enclosed fragments stand out in relief from the eroded softer matrix. The surface in several specimens is decorated with incised geometrical figures.

There are indications that the tripointed stones were sometimes varnished or covered with a gum or resin similar to that found on wooden idols, while the surfaces of others, as that of a bird-shaped, tripointed stone in the Museo Arqueologico in Madrid, retains traces of pigment. Although as a rule the surfaces of the tripointed stones are plane, one or two of them bear small, superficial, wart-shaped prominences, evidently intentionally made, and with considerable skill. Several specimens have surface pits or shallow depressions the significance of which is not apparent. These are generally two in number, one on each side, and in a few cases two on each side; others have four such depressions, two on the sides and two on the anterior and pos-

[1] While I was in Ponce, Porto Rico, in April, 1904, a plowman turned up one of these objects in a cane-field on the outskirts of the city.

terior of the cone. In one specimen with two such pits each is surrounded by or enclosed within a raised rim; in others a limb is carved in relief extending forward from this rim. In one or two examples, which have a fillet cut in relief on the forehead, there is a median pit in this band as in some stone masks. In the majority of specimens the depressions evidently once served as places for the attachment of shell or gold ornaments.

The use and meaning of the tripointed stones and collars are enigmatical. No reference is made to them by writers of the sixteenth, seventeenth, and eighteenth centuries, although they often describe the customs of the Indians in considerable detail. The absence of references to these remarkable objects by those contemporary with the natives has led some later authors to regard them as prehistoric, and as having passed out of use before the advent of the Spaniards. The first reference to stone collars and tripointed stones dates back to the middle of the nineteenth century, long after the culture to which they owe their origin had disappeared.

CLASSIFICATION OF STONE COLLARS

Professor Mason distinguishes two classes of stone collars, which he calls "the massive oval, and the slender oblique ovate, or pear shaped." "The latter," he says,[1] "are far more highly polished and ornamented than the former, and some of the ornamental patterns on the massive forms are reproduced but more elaborated on the slender variety, notably the gourd-shaped ridge surrounding the panels."

Collars of both the above classes are subdivided by the same author into two groups—(*a*) the right-shouldered, and (*b*) the left-shouldered collars, which may be distinguished as follows: If we imagine the collar placed over the neck, with its smooth edge resting on the chest and the pointed pole hanging downward, the collar may be called left-shouldered when the projection "faintly resembling a lashing of the two ends of a hoop" is on the wearer's left side and the decorated panel on the right. When, however, these portions have reversed positions, the collar is called right-shouldered. Certain of the massive collars have no superficial decoration, but are simply perforated stones, possibly unfinished specimens.

The general characters of the two groups of stone collars, massive

[1] *The Latimer Collection of Antiquities from Porto Rico in the National Museum,* and *The Guesde Collection of Antiquities in Pointe-à-Pître, Guadeloupe, West Indies;* reprint, 1899, p. 385. These articles originally appeared in the Smithsonian Reports for 1876 and 1884 respectively.

(plate XXI) and slender oblique ovate (plate XXII), differ to such an extent that it would seem as if their uses were not the same, and the differences in the symbolic markings on their surfaces would imply a different interpretation of their meaning. For instance, while the theory that these collars were worn over the neck applies fairly well to the slender ovate variety, it fails to apply to some of the massive forms. Although the latter might be regarded as objects of torture or symbols of servitude, this interpretation would hardly hold for the slender examples. On the other hand, it cannot be reasonably claimed that the use and meaning of the two groups

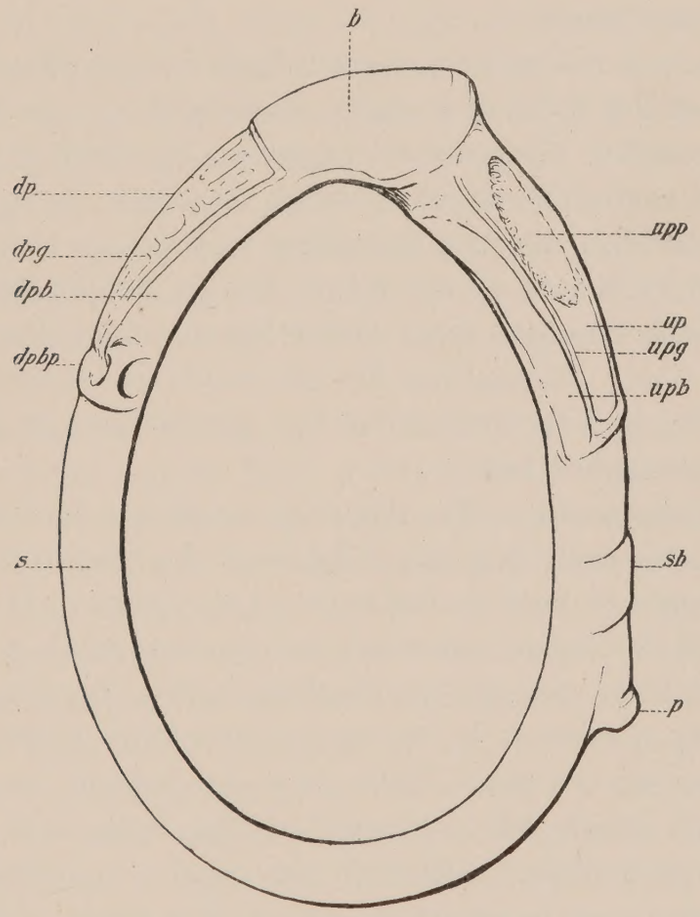


FIG. 20.—Schematic drawing of a slender, oblique stone collar.

were different, considering the similarity in their general forms; nor is it probable that the massive forms are unfinished specimens of the slender ones, inasmuch as the special superficial symbolic characters of each group are too well defined to suppose that one could be made out of the other.

There are certain regions of both the massive and the slender collars which can readily be identified and which for convenience have been designated by the following names: *b,* boss; *p,* projection; *s,* shoulder; *sb,* shoulder ridge; *dp,* decorated panel; *dpb,* decorated

panel border; *dpg,* decorated panel ridge; *dpbp,* decorated panel border perforation; *up,* undecorated panel; *upg,* undecorated panel pit; *upb,* undecorated panel border; *upr,* undecorated panel ridge. These regions occur in reversed positions in right- and left-handed collars, and vary in form according to the simple or elaborate character of the ornamentation.

b. Boss.—The so-called boss is a rounded, generally unpolished, prominence or swelling, well marked in slender but absent in massive collars, being generally undecorated, and so situated that it separates the two panels. In massive forms the boss is confluent with the undecorated panel, but in the slender it is evidently a continuation of the decorated panel.

p. PROJECTION.—The projection, which is a significant feature of the collar, has the form of a slight swelling or a rounded elevation, closely appressed to the body of the collar, to which it appears to be bound by an encircling shoulder ridge or fillet. In massive collars there are generally two protuberances, which may be called projections, one on each side of the ridge; but in slender collars there is only one, which emerges from under the shoulder fillet on the side opposite the boss. Sometimes the projection is ferruled, often with pits like eyes, and in one collar the prominence is said to have the form of a snake's head.[1]

sb. SHOULDER RIDGE.—The shoulder ridge is a raised band, cut in low relief, partly encircling the collar near the base of the projection, which it appears to bind to the body of the collar. It is sometimes broad and flat, but more commonly is a narrow bead, and in massive forms where there are two projections it fills the interval between them. Rarely absent, it is seldom in very high relief.

dp. DECORATED PANEL.—This term is applied to that region of the collar which lies adjacent to the boss, and on the side opposite the projection. Although the name is a useful one for distinguishing this part in many specimens, this panel, although generally smooth, is not ornamented. The general outline of the decorated panel of oblique ovate collars is quadrate or trapezoidal, with or without a marginal panel ridge formed by a shallow groove. In the massive forms the outline of this panel is often triangular. The superficial decoration of the panels of massive collars, when present, is less elaborate than that of the slender ones, and consists mainly of pits, incised circles, triangles, or parallel lines. Figures of faces

[1] This specimen is owned by Mr. Leopold B. Strube, of Arecibo, who has sent to me a drawing which shows the knob in the form of a snake's head.

with eyes and mouth are sometimes cut on this panel, which is ordinarily smooth, its surface slightly convex, and often highly polished.

dpb. DECORATED PANEL BORDER.—The margin of the decorated panel is called the panel border. In oblique ovate collars this border is cut in the form of a ridge looped into scrolls, often with pits resembling eyes. In massive collars this border is sometimes pinched up into three triangles. An examination of the decorated panel border in several specimens of slender collars reveals a conventional face with representations of ear pendants on each side. In others the face and ears appear on the panel border, but are more conventionalized. The best specimens of panel border decorations are scroll figures.

dpg. DECORATED PANEL RIDGE.—A groove bounding the decorated panel and separating it from the panel ridge often marks the limit of the panel. In oblique ovate collars this ridge is generally pinched up into an elevation at one angle of the panel, which is perforated, thus forming the decorated panel border perforation. The object of this perforation (*dpbp*) is unknown, but the care with which the ridge is modified at this point indicates that it must have been an important one. Massive ovate collars have no perforated angle of the panel.

up. UNDECORATED PANEL.—The undecorated panel lies between the shoulder ridge and the boss; it has a panel ridge but no decorated panel border. In massive oval collars the undecorated panel is simply a rough, slightly convex plane extending from one of the projections to the pole of the collar, the boss in this variety being absent. In many of the oblique ovate collars there is a pit (*upp*) or elongated shallow depression in the middle of this panel, but this is absent in the massive type. The meaning of this pit is unknown, but its rough surface suggests that it may have been the place of attachment of an ornament like a nugget of gold or a fragment of shell. On the Acosta theory that a head was formerly attached to the collar, the rough surface of this panel may have been the place of union, in which case the pit in the middle of the panel would serve to strengthen the attachment. The undecorated panel often has a panel groove (*upg*) and border (*upb*), but neither of these is so elaborately decorated as the corresponding region of the decorated panel. The rough surface of the undecorated panel is constant in all collars, indicating that it was hidden or covered in some way.

TRIPOINTED STONES

Not less enigmatical than the collars are the characteristic tripointed stones, which, like the collars, reach their highest develop-

ment, both artificially and numerically, in Porto Rico. While these objects were common on that island, they have not been found in Jamaica, the Bahamas, Cuba, or the Lesser Antilles. I have seen one or two from Santo Domingo, but their geographical distribution is practically the same as that of the stone collars.[1] As their name indicates, the tripointed stones are characterized by their trifid form, sometimes more or less obscure. Mason designates this group of stone objects as "mammiform," a term specially applicable to many specimens, whereas all show the trifid form which has suggested the designation *tripointed*.

The three projections which characterize this form may be designated as follows: Supposing the object placed so as to rest on the flat, slightly concave side, the vertical projection opposite this base may be called the conoid projection, and the other two points, or those at each end of the base, the anterior and posterior projections. In a comparative examination of tripointed stones it is convenient to place the specimen so that the anterior projection points to the observer's left hand.[2] That surface which is turned to the observer may then be called the proximal, and the opposite the distal surface. The flat, slightly concave side between the anterior and the posterior projections upon which the object rests may be known as the base.

In general appearance, as pointed out by Professor Mason,[3] these "objects present in more than one-half of the specimens, the image of a human figure lying on the stomach, with the face more or less upturned, the mouth open, and the countenance wearing a tortured look. The other end of the stone represents the lower extremities of the body, so doubled up as to expose the soles of the feet against the rump. On the back of the prostrate form is a conoid prominence, beautifully rounded up, straight or slightly concave in outline in front, a little convex in the rear, swelling out on one side slightly more than on the other, and descending more or less lower than the top of the head and of the rump so as to form anterior and posterior furrows. The whole appearance cannot fail to remind the student of the legend of Typhœus killed by Jupiter with a flash of lightning and buried beneath Mount Ætna."

[1] Pinart (op. cit.) gives their distribution as Porto Rico, Santo Domingo, St. Thomas, and Vieques islands.

[2] In specimens of the fourth type, where no head is cut on the stone, the same relative orientation may be obtained by placing the specimen so that the apex of the conoid projection turns slightly to the left.

[3] Op. cit., pp. 379–380.

Classification of Tripointed Stones

The tripointed stones may be classified as follows: 1, Tripointed stones with head on the anterior, legs on the posterior point. 2, Tripointed stones with face on one side of the conoid projection. 3, Tripointed stones with the conoid projection modified into a face. 4, Smooth tripointed stones without head, face, legs, or incised ornamentation.

The majority of these stones belong to the first group or type, in which the head and legs are always represented, although often obscurely, one on each of the basal projections. There are intermediate forms which connect these types with trilobed stones and aberrant forms which resemble them, the true identification of which is doubtful.

1. *Tripointed Stones with Head on the Anterior and Legs on the Posterior Projection.*—This type (plates XXIII, XXIII*a*), which is fairly well represented in all collections from Porto Rico, is well defined and easy to recognize. As a rule the distance between the anterior and posterior points (head and legs) is somewhat greater than the apex of the cone or height when resting on the base, and the conoid projection tips a little forward. The axis from head to legs is generally straight, but sometimes it is slightly warped. The surface is often decorated with incised geometrical lines, pits, and excrescences like warts. The main differences in this type are found in the forms of the heads and legs, which may resemble those of birds, lizards, mammals, or human beings. In rare instances both interior and posterior limbs are cut on stones of this type—the former at the base of the conoid projection, the latter on the posterior point.

Mason figures, from the Latimer collection, three specimens of this type with birds' heads.[1] One of these, according to this author, has the head of a "sea bird," another that of a "parrot," and the third is "parrot or owl-shaped." In the Neumann collection, purchased by me in 1904 for the National Museum, there is an instructive specimen of bird-headed tripointed stone of the first type, which differs somewhat from those in the Latimer collection. It has a long, curved beak, but no representation of wings and no well-defined legs.

One of the most interesting of the tripointed stones, representing a bird, is in the Archeological Museum of Madrid, Spain. A glance at this object shows, cut on the anterior point, a bird's head with the bill turned backward between the eyes toward the conoid process. Extending from the head posteriorly on each side there is a raised oval area carved in low relief with geometrical figures, as circles, dots,

[1] Op. cit., figs. 36, 39, and 41.

and lines. These areas apparently represent wings, being decorated with the same designs as the wings of an undoubted image of a bird in the Smithsonian collection.

It will be noted that by this identification the relative position of the conoid projection to the body differs from that of this part in other tripointed idols. It rises from the ventral, not the dorsal, region of the animal represented. The base of the idol is the back of the bird. Posterior appendages fail, as is commonly the case in most of the tripointed stones with bird's heads.

Some of the specimens[1] of the first type have heads with protuberant snouts like those of frogs and reptiles. Mason has suggested that one of these may represent the head of an alligator,[2] but it seems to me more likely that this particular idol was intended to indicate an iguana. The suggestion of the same author that the aborigines represented the head of a hog or peccary in another of these stones (fig. 40) loses force when we recall the fact that neither the hog nor the peccary belonged to the precolumbian fauna of Haiti or Porto Rico.

The number of tripointed stones with human faces exceeds those with bird or other animal heads, a fact which tells in support of the anthropomorphous character of the majority of these idols. Like those with animal heads, these human forms have two legs cut on the posterior point, but none appears to have representations of anterior appendages.

Several specimens of the first type, with lizard heads, have anterior legs cut on the sides of the conoid projection as well as the hind legs on the posterior point. One of the best of these (plates XXIII, XXIII*a*), apparently representing a reptile, was found with two others by Mr. Zoller in a cane-field at El Carmen farm, near Salinas, Porto Rico. The anterior legs are incised on the surface of the body, but the posterior legs are cut in high relief and appear to be drawn to the rump. Both pairs of appendages have pits on the first joint, giving to the posterior point the appearance of the eyes of a carved head. A superficial view of this idol might lead one to suppose that it was bicephalic, or that a head was carved on the posterior as well as on the anterior point. A closer study of the specimen and a comparison with others, however, show that the intention was to represent legs, not a head, on the posterior projection; what might be called eyes are pits in the thighs for ornaments, the fancied nose is a short, stumpy tail, and the mouth is simply a space between the toes.

[1] Mason, op. cit., fig. 40; also No. 17007, p. 383.

[2] Ibid., fig. 44.

2. *Tripointed Stones with Face on one Side of the Conoid Projection.*—In this type (plate XXIV) a face is cut in the interval between the apex of the conoid projection and the anterior point. Posterior limbs are generally absent, but anterior limbs may be represented, and in one specimen both are found.

Comparatively speaking, this is a rare type, only two specimens having been figured by Mason[1] from Porto Rico and one by the present writer from Santo Domingo.[2] In 1903 I was fortunately able to add two more specimens of this type to our collections; one of these was purchased from Señor Angelis of Cataño, the other from Señor Hernandez of Loquillo. The latter is figured in my Preliminary Report[3] of the expedition of 1903, the former in an accompanying illustration (plate XXIV).

Mason[4] gives the following description of one of the representatives of this type in the Latimer collection: "A curious specimen, made of mottled, flinty limestone. The projecting ends are entirely wanting. The front of the mamma or cone exhibits a grotesque human face. The rear is carved to represent a frog, whose nose forms the apex of the stone, and whose back and hind legs, drawn up, fill the remaining surface. The fore-legs pass down the sides of the cheeks and under the lower jaw of the human face in front. This is truly a marvel of aboriginal art, and may be set down as the best specimen of this class in the collection."[5]

The Cataño specimen (plate XXIV) is destitute of representation of posterior appendages or anterior legs on the sides of the conoid protuberance. The ears have the form of a figure 6, with shallow pits as if for the insertion of metal ornaments. The surface (plate XXIV, *c*) of this specimen is decorated with incised geometrical figures, as circles and triangles, resembling those on other Antillean objects.

Another tripointed stone of the same type was purchased by me in 1903 at Loquillo, near the eastern end of Porto Rico. This object has a comparatively rough surface, with anterior extremities, flexed

[1] Op. cit., figs. 42, 43.

[2] *On Zemes from Santo Domingo,* American Anthropologist, orig. ser., vol. III, 1891.

[3] *Preliminary Report on an Archeological Trip to the West Indies,* Smithsonian Miscellaneous Collections, vol. 45, Quarterly Issue, vol. I, 1903, pl. XLIII, 6.

[4] Op. cit., p. 383.

[5] Although the position of the hind legs resembles that of a frog's legs, it is practically the same as in tripointed stones with human and lizard heads. We might equally well say that many of the tripointed stones of the first type represent frogs.

forward, cut on the side of the conoid projection. No posterior limbs are represented. On the chin there are incised parallel lines which may represent fingers, but which also remind one of the so-called beard in some of the Porto Rican pictographs.[1]

3. *Tripointed Stones with the Conoid Projection Modified into a Face.*—This almost unique type is represented by two specimens from Santo Domingo, figured in my Preliminary Report for 1902–03,[2] and a third an illustration of which accompanies this article (plate XXV). In addition to the head, the first has rude representations of legs carved on its sides. In the second specimen, which is without legs, the snout is much elongated and the regions corresponding to the anterior and posterior projections of the first and second types are pointed. In the two described specimens of this type the base, like that of other tripointed stones, is slightly concave.

In the winter of 1903–04, I purchased, in the Neumann collection, another, the third known specimen, of this rare type of tripointed idols. While this object (plate XXV) resembles somewhat the two already mentioned, it is smaller, better carved, and more elaborately decorated. The material of which it is made is white marble, somewhat weather-worn, but not enough to destroy a fine network of incised decoration, which may be especially seen on the fillet over the eyes. Legs are represented as on the other specimens of this type, and the eyes and nostrils are also evident. It is possible that this idol represents a lizard (perhaps an iguana), or some similar animal.

Tripointed stones of the third type bear a remote likeness to the Porto Rican stone masks in which the conoid projection has been completely replaced by a nose, the anterior and posterior points having been reduced to chin and forehead. From such masks the transition is easy to oval stone disks with faces cut either in relief or in intaglio, but here all resemblance to the tripointed stones becomes lost.

4. *Smooth Tripointed Stones.*—This group (plate XXVI, 1, 2) includes those stones of tripointed form which are devoid of face or legs and all superficial decoration. Although this type has the same general form as the others, the specimens belonging to it, as a rule, are much smaller, one of them being only an inch in length. Some of the aberrant members (plate XXVI, 3) of the type have en-

[1] *Prehistoric Porto Rican Pictographs,* American Anthropologist (N. S.), vol. 5, No. 3, 1903.

[2] *Smithsonian Miscellaneous Collections,* 1903, vol. 45, Quarterly Issue, vol. 1, pl. XLIV, 3, 4.

largements on the posterior and anterior points, obscurely representing heads and feet. These may be regarded as connecting links between this and the first type.

THEORIES OF THE USE OF STONE COLLARS

The theories[1] that have been advanced in explanation of the use of the Porto Rican ring-stones are almost as numerous as the writers on the subject; but unfortunately not one of the theorists has carried his hypothesis far beyond a simple suggestion. It may be interesting to mention a few of these theories, limiting the references to stone collars found in the Antilles, and waiving for the present a discussion of their relationship to the stone yokes and collars of Mexico and Central America, concerning which there is considerable literature.

Mr. Josiah Cato[2] writes thus of one of these collars brought from Porto Rico by Mr. E. B. Webb:

"With regard to the probable use or purpose of these rings, I can give no information, but shall be very much obliged for any suggestion or for hints as to any works likely to contain such an account of the customs of the nations at the time of the Spanish invasion, as may afford a clue to the mystery. Such elaborate pieces of work in hard stone could not have been intended to serve either a temporary or trifling purpose. They are all far too heavy for ordinary use, but yet not heavy enough to kill or even to greatly torture the wearer, if we regard them as collars of punishment."

One of the early references to these collars occurs in Dr. Daniel Wilson's work on *The Archæology and Prehistoric Annals of Scotland* (pp. 156–157):

"But perhaps the most singular relics of the Stone Period ever discovered in Scotland are two stone collars, found near the celebrated Parallel Roads of Glenroy, and now preserved at the mansion of Tonley, Aberdeenshire. They are each of the full size of a collar adapted to a small Highland horse; the one formed of trap or whinstone, and the other of a fine-grained red granite. They are not, however, to be regarded as the primitive substitutes for the more convenient materials of later introduction. On the contrary, a close imitation of the details of a horse collar of common materials is attempted, including the folds of the leather, nails, buckles, and holes for tying particular parts together. They are finished with much care and a high degree of polish, and are described as obviously the workmanship of a skilful artist. Mr. Skene, who first drew attention to these remarkable relics, suggests the probability of the peculiar natural features of Glenroy having led to the selection of this amphi-

[1] Acosta's theory that the tripointed stone was united to the stone collar, forming a serpent idol, is considered at the close of this article.

[2] *Proc. Society of Antiquaries,* 2d ser., vol. IV, no. 5, pp. 215–216.

theater for the scene of ancient public games; and that these stone collars might commemorate the victor in the chariot race, as the tripods still existing record the victor in the Choragic games of Athens. But no circumstances attending their discovery are known which could aid conjecture either as to the period or purpose of their construction."

Although these collars may have been found at Glenroy and have been ascribed by Dr. Wilson to the stone age of Scotland, they are evidently Porto Rican in origin, having been carried to Scotland from over the seas. Stephens, in *Flint Chips,* includes these specimens with other West Indian collars in English collections.

Mason seems to have adopted no theory regarding the use of the rings or collars, saying, "Whether they were the regalia of sacrificial victims,[1] of military heroes, of ecclesiastical worthies or of members of some privileged caste, who marched in double file through the streets of Porto Rican villages long since decayed, will perhaps forever remain a mystery."

Dr. A. Stahl considers the collars as *toison de piedra*—insignia of rank worn by chiefs or caciques in important festivals or assemblies. This explanation he applies more especially to the slender specimens, for the massive forms he regards as possibly implements of torture. It should be borne in mind that there is a general similarity in form of the massive oval and oblique ovate types which would imply a like use for both. Dr. Stahl declares that they "never have the form of serpents, as some have supposed."[2]

Sr. Agustin Navarette considers that these rings were neither idols nor parts of the same. He supposes that the massive forms were purely for the adornment of the cabins of the caciques, comparable with crowns which were worn by them. It is quite improbable that objects which cost so much time and labor were designed to be purely ornamental; and even granted that they were symbols of this kind, the question still remains, What is the meaning of their superficial decoration?

Sr. E. Neumann[3] regards it certain that the entire lifetime of a human being would be required for the polishing and ornamentation of a completed stone collar. He ascribes to a "Catholic priest," whose name is not given, the opinion that every cacique made a collar to be deposited over his grave on the day of his interment, in order to drive off the devil, but no proof is given to support this specula-

[1] Professor Mason had already said that there is no mention of human sacrifice by the natives.

[2] *Los Indios Borinqueños,* pp. 151–152.

[3] *Benefactores y Hombres Notables de Puerto Rico,* vol. II, p. li.

tion. Señor Neumann regards the idea, which he attributes to Señor Pi y Margal, that the tail of a serpent was cut on the surface of the collar, as a grave error, and seems not to have appreciated the true relation of the two parts which Acosta supposes were united to form the serpent image.

Regarding the use of these collars, Ober[1] says:

"Just what that use was no one can tell, the historians being silent on the subject, but I was told, when in Puerto Rico, by an old priest, that the Indians made them to be buried with them in their graves. One would spend a lifetime laboriously carving out this solid stone collar, that when he died it might be placed over his head, thus securely fastening him to his last resting place and defying the efforts of the devil to remove him."

The various interpretations of stone collars referred to in the preceding pages resolve themselves into two groups, one of which lays emphasis on the use of these objects as insignia or ornaments, the other on their symbolism. Those who have pointed out what they regard as their use have overlooked the fact that the decoration of the collar is highly conventionalized, an explanation of the significance of which they do not offer. We may accept the theory that some of them were worn on the body or around the neck, but the more important question of what they represent remains unanswered.

But there is a very serious objection to the acceptance of the theory that certain of these collars were worn as insignia, for some of them are too small, and the heaviest could be transported only a short distance even by a strong man.[2] Evidently they were not worn by chiefs as ornaments. The theory that they were in some instances worn by victims of sacrificial rites is weak, for there is evidence in historical records that sacrificial ceremonies, save of very harmless character, were not practised by the Antilleans.

It may be said in reply that here we have survivals of insignia or symbols no longer used, but preserving the form of those which were once employed; and it may also be urged that the heavy, massive forms of collars were unfinished, or that the massive and slender forms had different uses. While all these suggestions may have weight, it is remarkable that none of the early writers mention having seen them on the bodies of Indians. If they were used at the time of Las Casas, Roman Pane, Benzoni, and other early writers, it must have been in secret, which would show that they were ceremonial

[1] *Aborigines of the West Indies.* Proc. Amer. Antiquarian Soc., Worcester, Mass., 1894, p. 26.

[2] This objection to the theory that the stone collars were worn by men in dragging heavy objects, as logs or canoes, is a valid one.

objects. It is important to note that we have no early descriptions of the ceremonies of the Porto Rican aborigines, among whom these collars would have been the best known. No devoted Catholic priest observed and specially described the Borinqueños as Roman Pane, Morales, or Benzoni did the Haytians. What we know of the Porto Ricans of the sixteenth and seventeenth centuries is derived from the briefest possible references by Oviedo, Gomara, and others, who say that in their time they were similar to the inhabitants of Hispañola. The Porto Ricans may have used these collars in both secret and public exercises, but as no one is known to have specially described their ceremonies, there is no record of their purport or use.

All the available facts extant in regard to these collars point to their religious, or rather to their ceremonial, nature. We naturally regard objects made with so much care, and so highly symbolic in their decoration, as idols or as connected with worship; it is therefore more as such than as secular implements or ornaments that we can hope to decipher their meaning. As their strange form presents enigmatical possibilities, we naturally associate them with that other enigma in Porto Rican archeology, the tripointed stones.

The most suggestive interpretation yet offered is by Sr. J. J. Acosta, in his notes on Abbad Iñigo's great work,[1] that these stone collars were united with the tripointed stones and that both together form a serpent idol.

USE OF TRIPOINTED STONES

The use of the tripointed stones is as enigmatical as that of the stone collars or rings. Many authors have regarded them as idols, while others consider them as decorated mortars on which grain, seeds, or pigments were ground. In the latter interpretation the conoid prominence is regarded as a support which was embedded in the earth, thus imparting stability to the object, while the concave base, turned uppermost, served as a grinding surface.

Two objections may be urged to the theory that these triangular stones are mortars or grinding implements.[2] In the first place we can hardly suppose that one of these objects of the fourth type, which is only an inch in length, could have been very effective if used in

[1] *Historia Geografica, Civil y Natural de la Isla de San Juan Bautista de Puerto Rico; Nueva edicion anotada en la parte histórica y continuada en la estadística y económica;* Puerto Rico, 1866, p. 51.

[2] Many specimens of pestles with handles cut in the form of birds, quadrupeds, and human beings might be mentioned in this connection.

such a way; secondly, some of these specimens have all their sides as smooth as glass, showing no surface upon which anything could have been ground. In the third type the conoid prominence is highly ornamented, which would hardly be the case were this part buried in the ground, thus hiding the decorations from view. The conoid projection is not of proper shape for holding in the hand—a vital objection to the theory that the tripointed stones were used for rubbing.

But perhaps the strongest objection to the theory that the tripointed stones were used as mortars or rubbing stones is presented by a specimen in the Latimer collection which has a portion of the flat base covered by a superficial layer of resinous-like gum or varnish. There are other specimens which lead me to believe that several of these stones, like some of the wooden idols, were covered with a similar substance, the occurrence of which, still clinging to the base, shows the absurdity of regarding this as a polishing or grinding surface.

Mason does not commit himself to either the mortar or the idol theory. He says:

"The rough under-surface of the mammiform stones suggests the grinding of paint, incense, spice, or some other precious material, and the natives are said by the historians to have been fond of aromatic substances. Against this it may be urged that they are too costly for mortars; that some are hollowed underneath, some are flat, and some are convex; and that though very rough on the under side, the roughness seems to be that of an original pecking, excepting at the chin and knees of the Typhoean figure, where the stone is worn smooth. The furrows at the base of the mammæ seem to indicate the custom of lashing them to a staff as ensigns, or [their use] to dash out the brains of a victim or an enemy. There is no mention, however, so far as I am acquainted, of the natives performing human sacrifices. This lashing theory is strengthened by the fact that on some of the masks which closely resemble the mammiform stones there are cleat-like projections, evidently to be lashed to a handle. There are no grooves worn in the furrows by a lashing that I could discover. The bulging to the side of the mammæ, some to the right, others to the left, hints at their use in pairs."[1]

The theory that the tripointed stones are idols has many advocates, although some of the interpretations of the gods they represent are entirely speculative. Dr. Stahl,[2] in his chapter on religion, by

[1] Op. cit., p. 392.

[2] *Los Indios Borinqueños,* pp. 157–172. In this chapter Dr. Stahl makes no reference to Roman Pane and other writers who have given the most authoritative accounts of the religious concepts of the Haytians. There is little doubt that the Borinqueños resembled the Indians of Hispañola in their religious as well as in their secular customs.

limiting the term to a belief in a supreme beneficent being, or god, and a malignant being opposed to the same, finds that the Borinqueños were absolutely wanting in religious ideas ("*carecian en absoluto de ideas religiosas*"). He may be right in his criticism of Oviedo and other historians, that they read their own ethical ideas into their accounts of the West Indian religion, but he is certainly in error in concluding that there are no proofs, archeological or otherwise, to justify belief in the existence of any religious cult among the Borinquen Indians.

"The Antilles," writes Professor Mason, "are all of volcanic origin, as the material of our stone implements plainly shows. I am indebted to Professor S. F. Baird for the suggestion that, from the sea, the island of Porto Rico rises in an abrupt and symmetrical manner, highly suggestive of the mound in the mammiform stones, so that with the aid of a little imagination we may see in these objects the genius of Porto Rico in the figure of a man, a parrot, an alligator, an albatross, or some other animal precious to these regions where larger animals are not abundant, supporting the island on its back."

Earlier in this article I have referred to a few paragraphs by Professor Mason regarding the legend of Typhoeus killed by Jupiter and buried under Mount Etna. As he points out, "a similar myth may have been devised in various places to account for volcanic or mountainous phenomena."[1]

According to Sr. Agustin Navarette, Dr. Calixto Romero Cantero in his refutation of Dr. Stahl recognized in this tripointed figure the genius of evil weighed down by Borinquen, represented by the mountain Lucuo or Luquillo, and symbolized by the conoid prominence. He finds this theory of Cantero as objectional as that of Dr. Stahl that the Borinqueños had no religion, because there is no reason to believe that the Kiche god Cabraken was thought to be buried under Borinquen. Navarette[2] finds in this image a "cosmoteogonico" symbol conforming perfectly with a tradition given by Buret de Longchamps. "The cone," he says, "is chaos, from which, in the form of sunken rocks [*escollos*], arose Taraxtaihetomos, the *principio creador,* perfectly defined, represented by the head, and Tepapa, the inert unformed matter, represented by the posterior part 'crossed by rays' [posterior appendages and feet!]." The universe was born from this "*principio creador*" and matter, as was likewise the firma-

[1] Op. cit., p. 380.

[2] *Estudios de Arqueologia de Puerto Rico. Resultados de una excursion cientifica.* Articles I–VIII, first printed in the periodical *El Noticio,* May, 1896; reprinted in *Aquila,* Ponce, April and May, 1904.

ment (*"bóveda que cubria la tierra"*); hence, he asserts, the base (of the tripointed stone) is scooped out in the form of an arch. "In a word," says Navarette, "this figure [tripointed image] is a semi [zemi], the unique Indo-Borinquen idol in which is symbolized the creator and inert matter on two sides of chaos which extends over the firmament [*bóveda del Universo*]."

My chief objection to Dr. Cantero's interpretation of the symbolism of the tripointed idols is that he elevates a "genius of evil" to a place it never occupied in the mind of the Antilleans. There is no satisfactory proof that the Borinquen Indians ever recognized a god of evil as we understand the conception. They no doubt believed in a great being whose power caused the terrible hurricanes which at times sweep over the island, and they possibly personated or deified this power as a great snake god. The early missionaries readily imagined that this deification of a mythic serpent was the analogue of their own personification of evil, but this interpretation was wholly their own, not that of the Indians.[1]

Navarette advances no adequate support for his statement that the conoid projection represents "chaos," and gives no authority for the statement that the Antilleans believed that the union of the *principio creador* and matter gave birth to the universe. I must also take issue with him in his statement that the "*semi*" is the unique "Indo-Borinquen" idol in which is symbolized this *principio creador,* because I believe he has mistaken the true meaning of the term *zemi.* Although the great Sky God may have been called a *semi, chemi, cemi,* or *zemi,* the word probably means not one but many subordinate supernatural beings, as elsewhere pointed out. Tutelary gods are called *zemis,* in which case the word has simply the same meaning as "clan totem." These tripointed Borinquen idols have different forms, representing reptiles, birds, and human beings, a difference which indicates the improbability that they represent one great supernatural being or creator (*"principio creador"*).

The comparison of the head of a tripointed stone with a "creator" and the feet with "matter," the conical projection representing "chaos," has no historical evidence to support it, while the recognition of the arch of the universe in the curved base is equally unsupported. The second and third types of tripointed idols show the absurdity of the entire theory of the nature of the tripointed stones

[1] The word *mabouya,* used by the Antilleans as a name of some of their gods, as well as of images of the same, is probably derived from *ma,* "great," and *boya,* "snake." The same word *boya* (English boa) likewise gave the name *boii,* "sorcerers," to some of their priestly orders.

as expounded by Navarette. Chaos in the last type mentioned has evidently been swallowed by a huge monster whose mouth takes its place.

This likeness of the tripointed stone to a god or genius of Porto Rico buried under a superposed mountain represented by the conoid projection is marked in the first type, less evident in the second, and wholly absent in the third. In the fourth all semblance of this kind has disappeared. All theories which compare the conoid prominence to a mountain, to chaos, or the like, fail when we apply them to all types of tripointed stones, and do not account for the different kinds of heads found in the first type.

The tripointed stones represent several different kinds of supernatural beings, anthropomorphic and zoömorphic. The Borinquen Indians, like those of Hayti, recognized one great supreme god, but he was not a creator. Roman Pane distinctly states that this god had a mother whose five names he has mentioned.

I regard the tripointed stones as clan idols or images of tutelary totems—true *zemis* in the sense in which the term is employed by the majority of early writers. The differences in their forms denote different conceptions of the zemi in different clans. Each cacique, no doubt, had one or more of these images, representing his clan zemi and such others as he had inherited or otherwise obtained. I regard them as the idols of which Roman Pane wrote: "Each one [Indian] worships the idols of special forms called zemis, which he keeps in his own house."

ELBOW STONES

There is another group of stone objects, also found in Porto Rico, which, like those we have considered, are likewise problematical, yet which may shed some light on the relationship of stone collars and tripointed idols. I refer to the objects which, from their shape, may be called "elbow stones,"[1] several of which occur in different collections. Some of these stones closely resemble fractured or broken collars of the slender ovate type, and often have parts which may be compared to boss, panel, and panel margin of entire collars. The finish of the extremities of the elbow stones indicates that they are not broken collars but are of another type with some similarities to them. Their significance in relation to the theory that tripointed stones and collars were the two component parts of a single object lies in the fact that a head resembling a mask-like tripointed stone is

[1] This designation, here used for the first time, is a convenient one to apply to this group of stone objects peculiar to Porto Rico and Santo Domingo. The group includes many aberrant forms of elbow shape, the exact use of which is problematical. One of these is illustrated by Mason in his figure 195*

sometimes cut on the part of the elbow stone corresponding to the undecorated panel of the stone collar. It is held that in these elbow stones the face is cut on the undecorated panel instead of being fastended to it as in the case of collar stones.

Two examples of these elbow stones with faces may be mentioned to illustrate their significance in this connection; one (pl. XXVII) is figured by Mason, the other by Pinart. Professor Mason is doubtful whether the specimen which he illustrates[1] is a broken collar adapted to a secondary use or belongs to a distinct class. Something could be said in support of the former supposition, but there are similar specimens where resemblance to a broken collar is less apparent. The elbow stone figured by Pinart[2] has a human face represented on that part of its surface which corresponds to the undecorated panel of a collar. In his description of this object, Pinart writes: "L'ornementation des premiers varie assez, bien que le principal sujet de l'ornementation se trouve toujours à la partie oú la collier présente un renflement. Cette ornementation représente dans le cas présente une figure humaine: nous avons recontré également la grenouille, la chouette, etc., etc."

The figures of the above mentioned objects resemble each other so far as the position of the face is concerned, the ears and fillet over the forehead being in both instances well represented. Pinart's specimen has the arms, or extensions comparable with that portion of the body of a collar, longer than those figured by Mason, and are beaded at the extremity, a feature not represented in any stone collar. Similar beading is found on an elbow stone figured by Mason[3] in which no face is cut on the panel region, and the same feature occurs in a rude elbow stone which I collected at Ponce, Porto Rico. In the Mason specimen one arm is perforated as in the elbow stone with a face which Mason describes and figures. This perforation and beading may indicate places for attachment of strings by which the object was suspended or lashed to some other object.

One of the best of these elbow stones has a complete figure of a human being cut in relief on the panel corresponding to that bearing the face in the Mason and Pinart specimens. This object has no resemblance to a broken collar, although it belongs to the same type as that above mentioned. Like Pinart's specimen, the extremities of the arms or extensions are beaded, a feature not found in the Mason elbow stone on which a face is represented. This elbow stone has a complete human figure carved in relief on its panel and is figured in

[1] Op. cit., figure 58 (plate XXVII of this paper).

[2] Op. cit., pl. 10, figure 3.

[3] Op. cit., figure 195.

Neumann's work, above referred to, which is a reprint of a figure in the Spanish periodical *La Ilustración Española y Americana.*

I regard these elbow stones as a distinct type, having a morphological likeness to the pointed pole, or boss and neighboring parts, of an oblique oval collar. Their use and meaning are enigmatical.

ACOSTA'S SERPENT THEORY OF STONE COLLARS

I have reserved a consideration of this theory until the end because it differs radically from all others, and because a consideration of it demands a knowledge of the forms of the three groups of objects herein considered—stone collars, tripointed idols, and elbow stones. Señor Acosta was familiar with the Latimer collection before it came to this country, and also with another, now scattered, which formerly existed in the Museo de Artilleria at San Juan, Porto Rico. He writes thus of the stone rings and tripointed figures:[1]

"Todos estos ídolos, aunque varían en el tamaño y en la clase de piedra en que están labrados, pues unas son cuarzosas y otras calizas, ofrecen generalmente la misma disposicion y figura. Consta cada uno de dos partes distintas y separadas, pero que se adaptan perfectamente entre sí—1ª Un anillo elipsoidal, en cuya superficie externa aparece tallada la cola de una serpiente.—2ª Una pieza maciza cuya base, por donde se adapta al anillo, es plana y de figura elipsoidal, y cuya parte superior termina en forma de cono: hácia un extremo del eje mayor de la base hay varias molduras caprichosas, y en el extremo opuesto una cara humana. Unidas las dos partes del idolo, semeja el todo una serpiente enroscada con fisonomía humana."

The following translation has been made of Acosta's description:

"All these idols, although they vary in size and in the kind of stone of which they are made, for some are of quartz[2] and others of limestone,[3] have the same general proportions and form. Each one is composed of two distinct and separate parts which fit perfectly together: 1st, An ellipsoidal ring, on the external surface of which is cut a serpent's tail. 2nd, A massive piece, the base of which when it fits the ring, is flat and of ellipsoid shape, while the upper part terminates in a cone; toward the end of the greater axis of the base there are various capricious moldings, and at the opposite end a human face. When the two component parts of the idol are united, the whole resembles a coiled serpent with human physiognomy."

One or two other authors speak of these collars as "snake stones," but as no additional grounds for this identification are given, they apparently accepted Acosta's conclusion.

[1] *Historia Geográfica, Civil y Natural de la Isla de San Juan Bautista de Puerto Rico,* por Fray Iñigo Abbad y Lasierra; Puerto Rico, 1866, p. 51.

[2] Diorite.

[3] Marble.

Several significant facts appear to support the theory that another object was once attached to the undecorated panel of the stone collar:

(1) This panel is left rough and is never decorated; its plane of convexity is approximately the same as the concave curvature of the base of the tripointed stones. It has a pit or depression in its center, and the base of the tripointed stone sometimes has a similar pit in the same relative position. On this theory the object of these pits would be to insure a firmer attachment of the two objects. The use and function of both collars and tripointed stones are enigmatical, but their geographical distribution is identical, and the abundance or rarity of the two are in the same relative proportion.

(2) Some of the elbow stones appear feebly to support the Acosta theory in this way. The elbow stone of the Latimer collection resembles closely that part of a broken collar which includes the boss and one panel. An examination of this panel shows that it conforms in relative position to the undecorated panel of a collar. A human face is carved in relief on this panel in the place at which the tripointed stone would have been cemented to the collar. The elbow stone figured by Pinart has a similar face cut on its panel. On the supposition that there is a likeness in form between stone collars and elbow stones, this fact may be significant.

It may be mentioned that since Acosta wrote the lines above quoted a larger number of these tripointed stones than he saw have been examined, and that from increased knowledge of them minor corrections of his account are possible. For instance, what he calls "capricious moldings" toward the end of the greater axis are undoubtedly legs or appendages, while the "human face" at the other end of the greater axis is now known to be sometimes replaced by the head of a bird, lizard, or other animal. Acosta apparently was familiar with but one kind of tripointed stone, or that called in this article the first type.

As objections to Acosta's theory of the former union of stone collars and tripointed stones, the following may be urged:

(1) That in the available accounts of the religion of the natives of the West Indies, no mention is made of a serpent cult, and that no record contemporary with the aborigines has given the snake a prominent place in myth or ritual. It is recorded, however, that two wooden images of serpents stood at the entrance to a house on one of the islands visited by the Spaniards, and I have already referred to a wooden serpent idol in Puerto Plata, which is one of the best known examples of aboriginal West Indian wood carving. These show conclusively that the Antilleans carved images of snakes in wood, hence

the implication is that these images were used as idols and played a conspicuous role in their worship.

(2) Another fact, quoted as opposed to the Acosta interpretation, is that no tripointed stone has yet been found to fit closely to the undecorated panel of any collar, nor have these objects ever been found united or in close proximity.

(3) A glance shows that some of these tripointed stones bear birds' heads and representations of wings; others have snouts, like reptiles; and in many, grotesque human faces appear to have been represented, but not a single tripointed stone resembles a serpent's head. To meet this objection it may be urged that primitive art is rarely realistic, but more often is highly conventionalized.

(4) The presence of legs on a majority of the tripointed stones of all types is fatal to the theory that these images represent heads of apodal serpents. If we avoid this objection by limiting the theory to those tripointed stones which have no legs carved in relief or otherwise, we are obliged to discriminate, for what is true of one ought to hold good for the others.

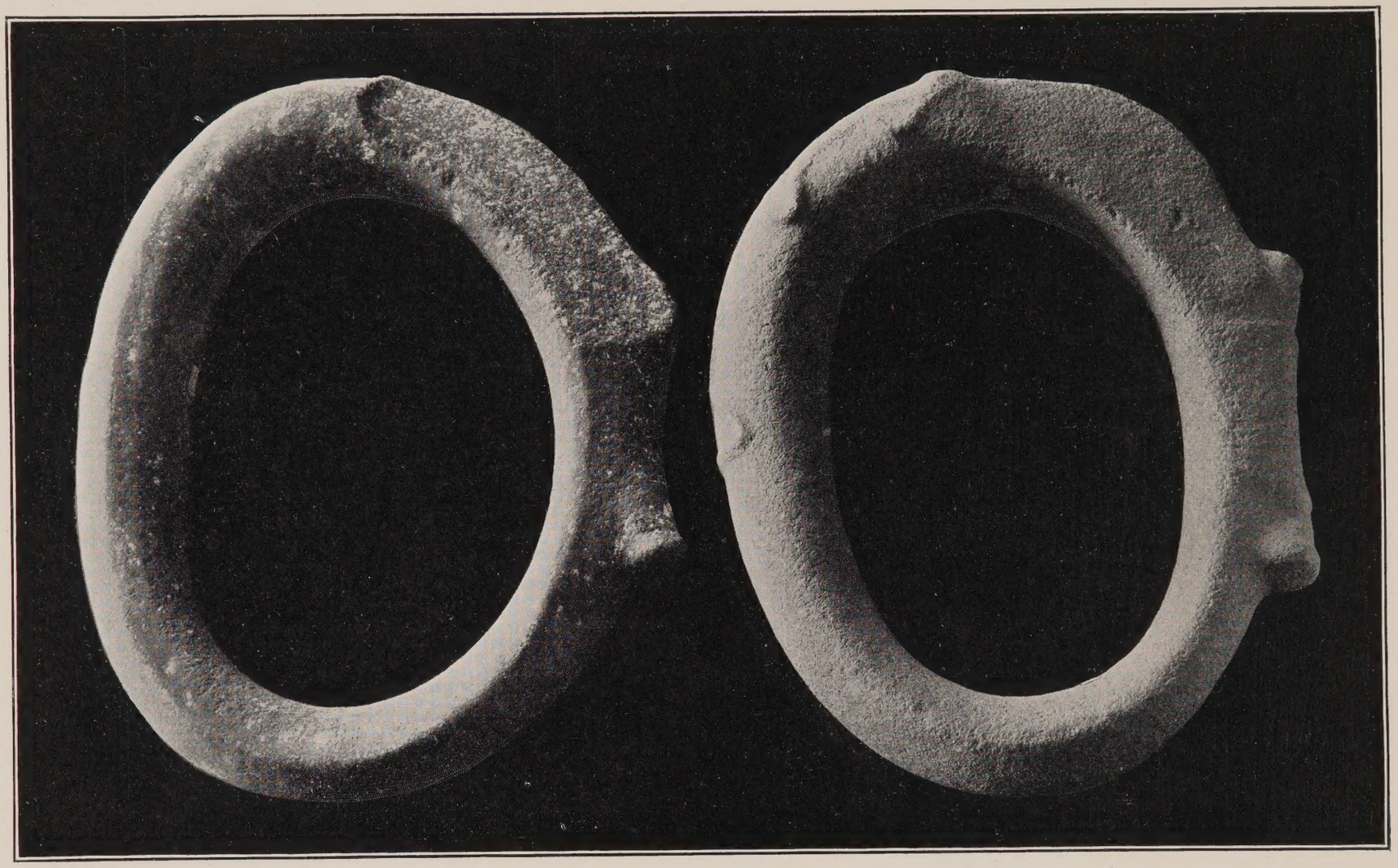
(5) Another objection which may be raised to the Acosta theory is that representations of heads, realistic or symbolic, or both, are cut on the decorated panel border of several collars. Although these carvings are sometimes highly conventionalized, their presence would imply two heads to the same body if a tripointed stone also representing a head were attached to the undecorated panel.

The weight of evidence thus seems to be against the Acosta theory that the tripointed stones were attached to stone collars for the purpose of completing idols of which he supposed the two objects formed the component parts.

The theory that collars and tripointed stones stand in the relationship of female and male symbols, and were used in ceremonies to insure germination or fructification, is not improbable, but like other theories it lacks decisive facts for its support.

In closing this article I find, like those who have previously studied the subject, that what is needed to solve this problem of the stone collars and tripointed idols, are more facts regarding their differences in form. Especially do we need observations on the association of these objects with other aboriginal specimens. Are they found with remnants of human skeletons or with other mortuary remains, and, if so, is their association of such a nature that they suggest idols or religious paraphernalia? It is not too late to answer these questions satisfactorily if investigations are continued in parts of Porto Rico hitherto unknown to the archeologist.

a

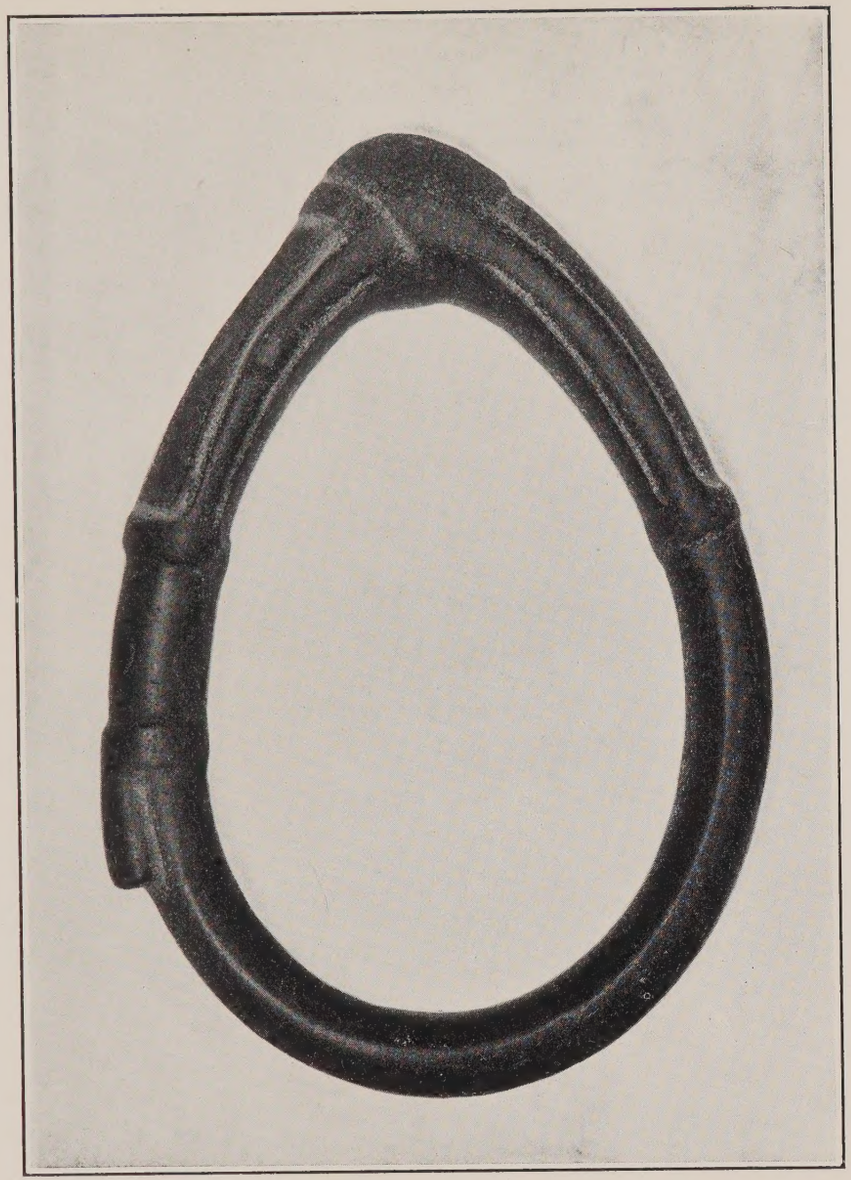


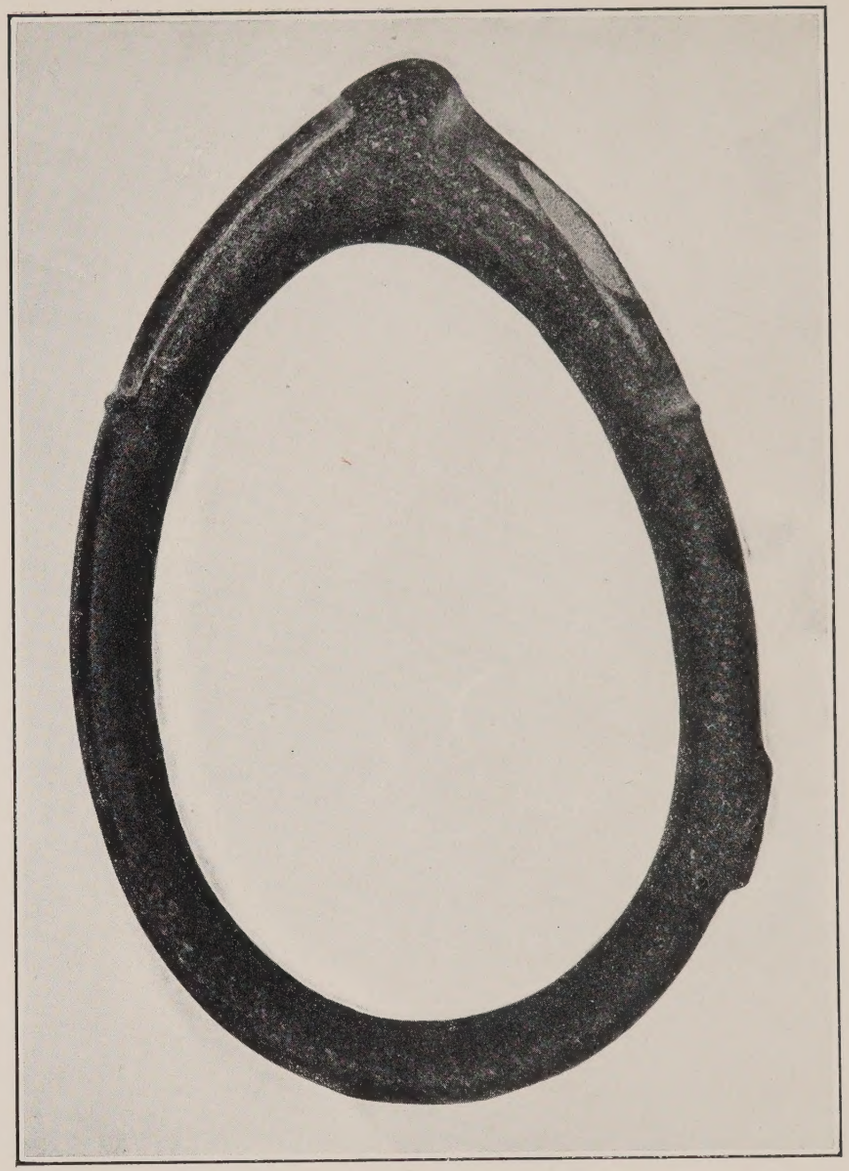
b

MASSIVE COLLARS

a, Diameter 17½ inches (No. 220,600). *b*, Diameter 18 inches (No. 201,495).

a

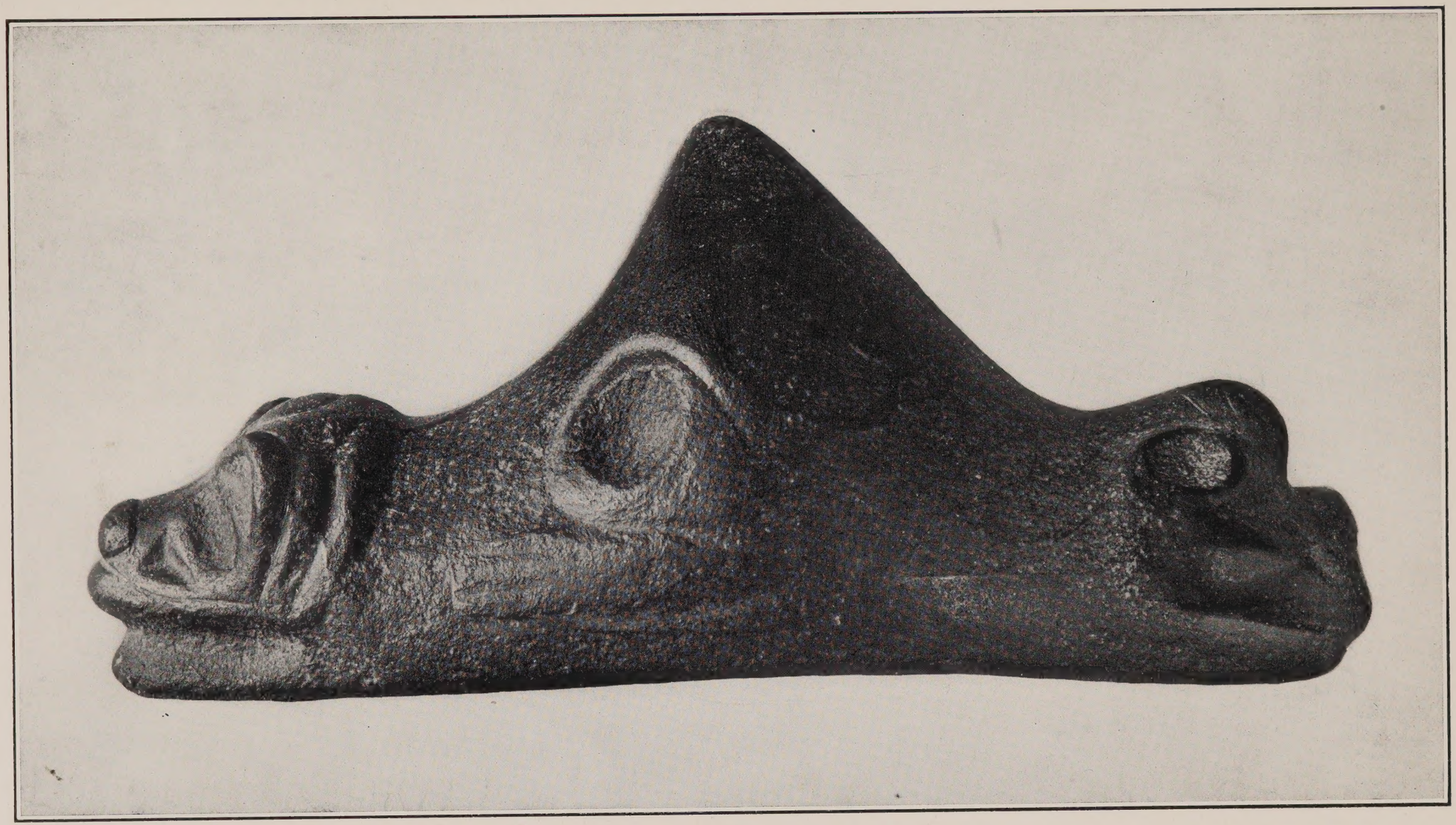




b

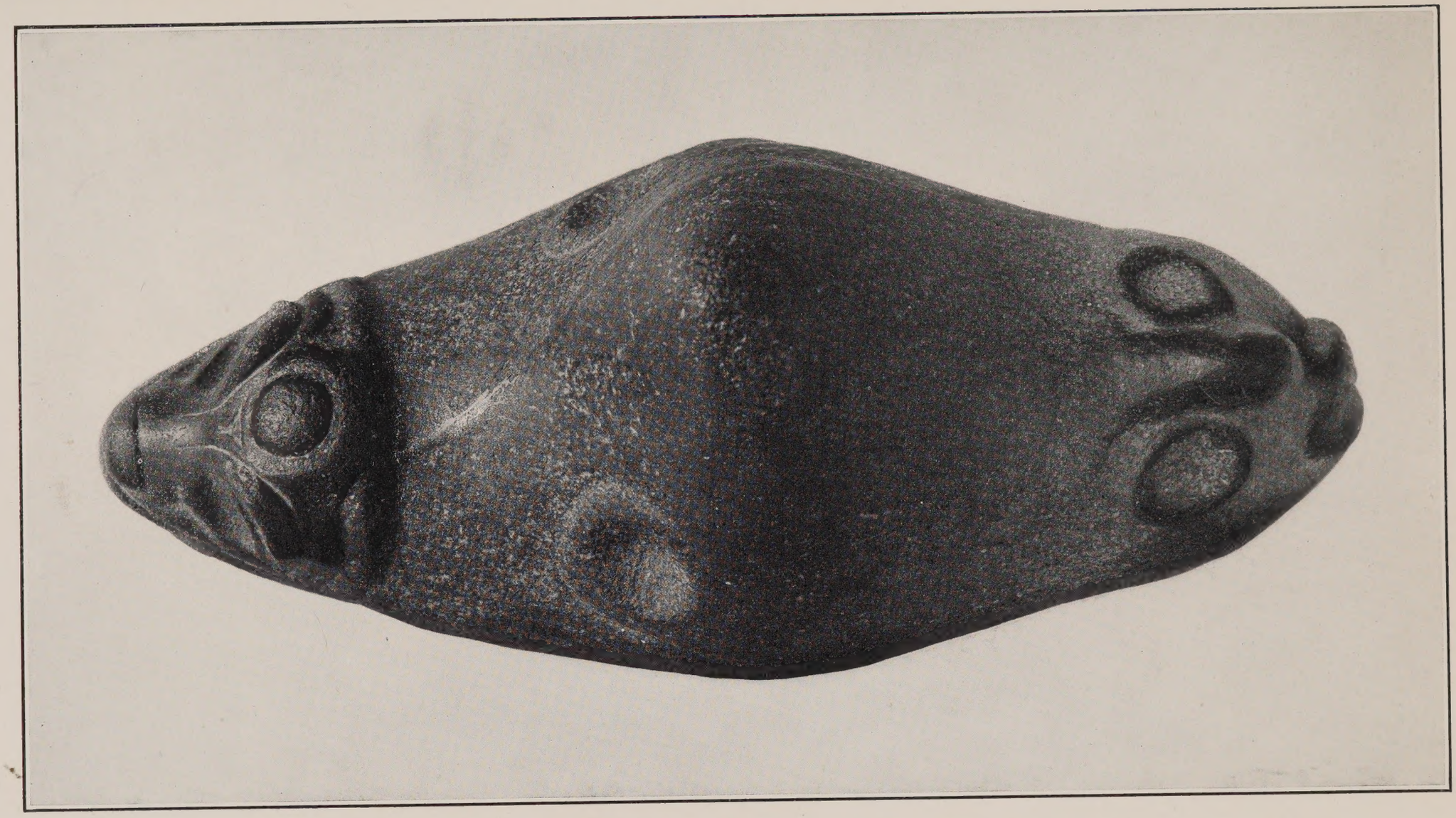
SLENDER COLLARS

a, Diameter 15½ inches (No. 231,397). *b*, Diameter 17 inches (No. 231,396).



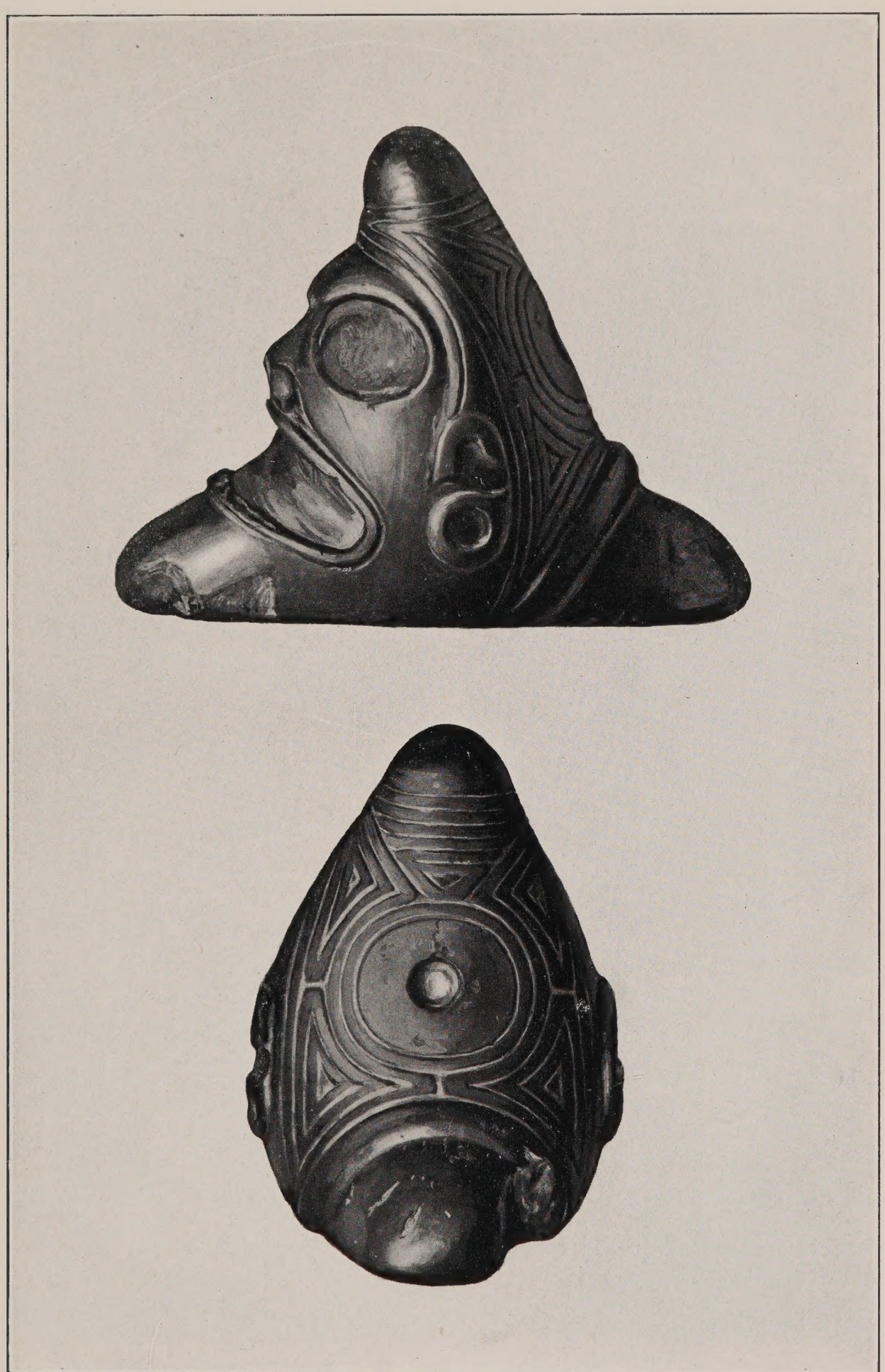
TRIPOINTED STONE OF THE FIRST TYPE (SIDE VIEW)

Length 11½ inches (No. 231,142).



TRIPOINTED STONE OF THE FIRST TYPE (TOP VIEW)

Length 11½ inches (No. 231,142).

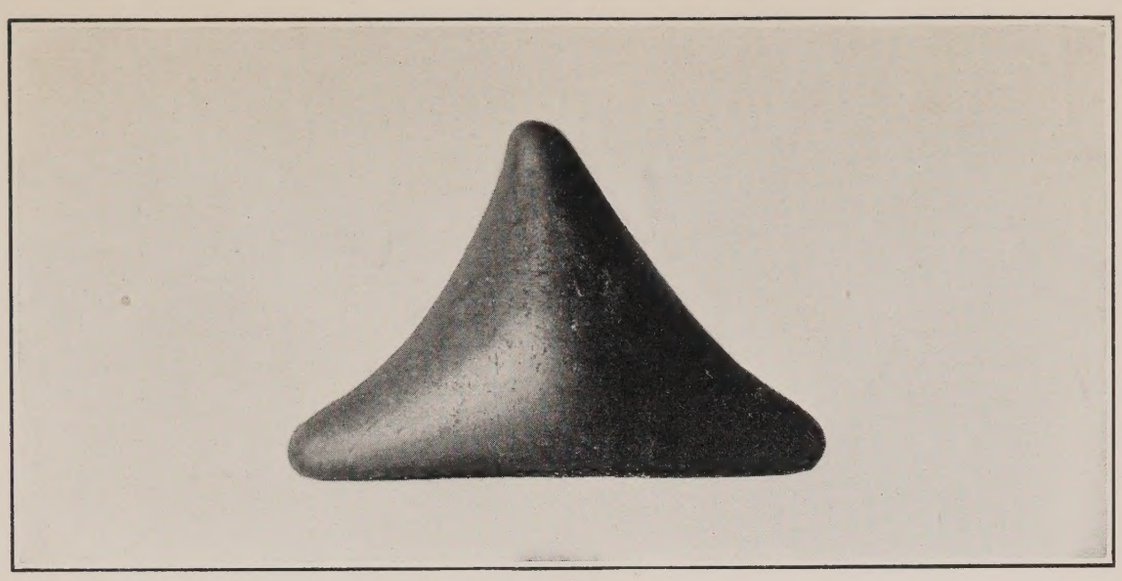


TRIPOINTED STONES OF THE SECOND TYPE

Side view, length 4 inches; rear view, height 3 inches. (No. 220,621.)

TRIPOINTED STONES OF THE THIRD TYPE

Length 4¼ inches (No. 231,411).



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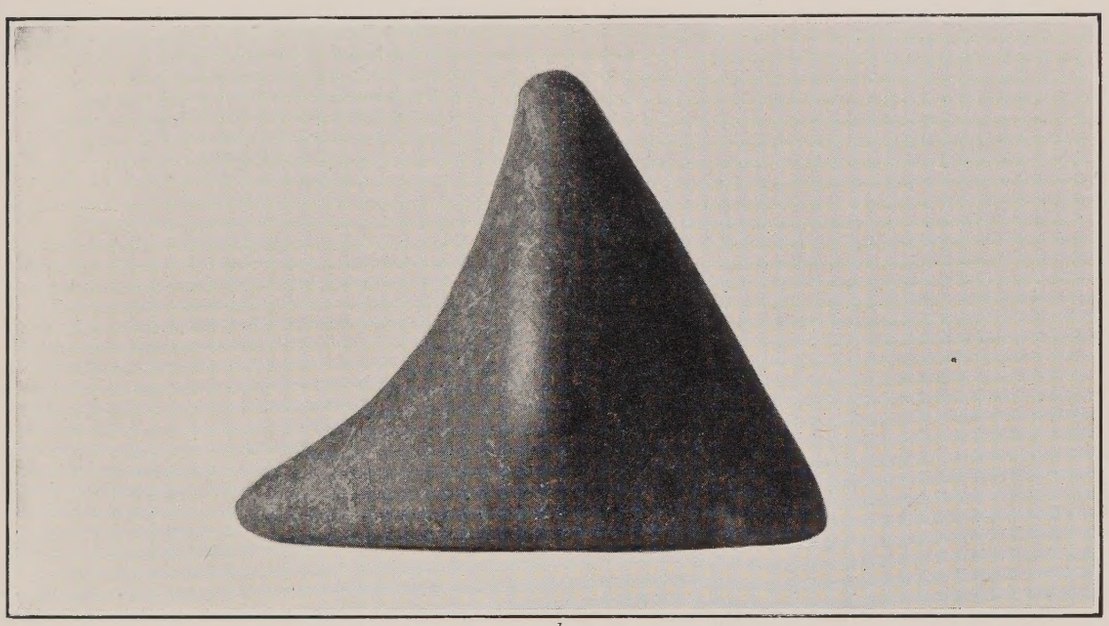
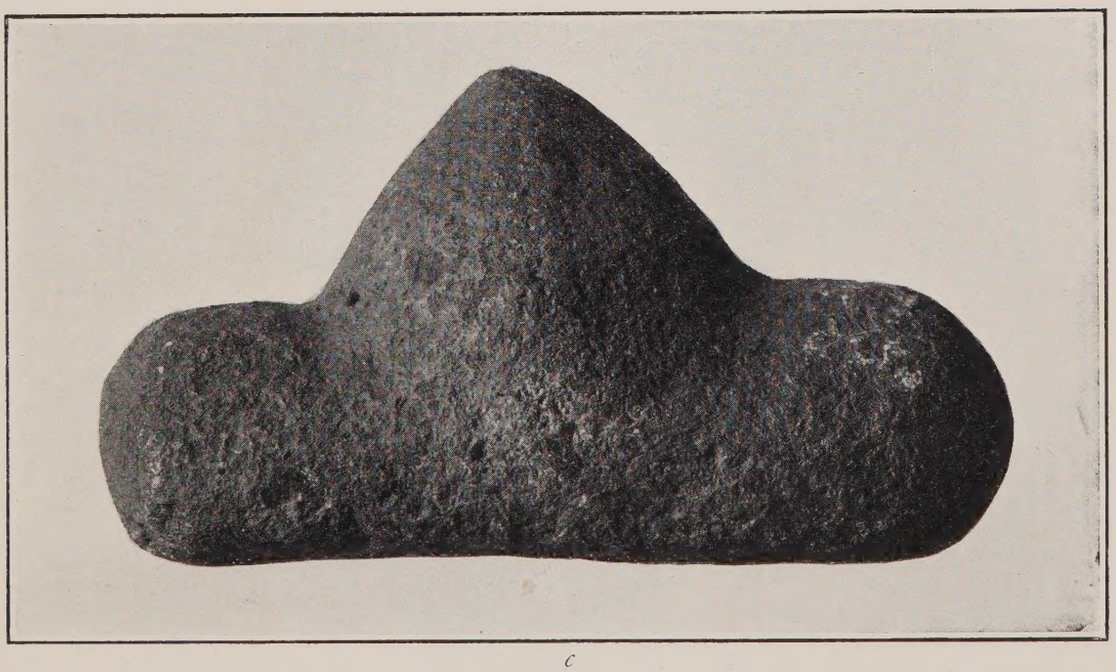


b



c

TRIPOINTED STONES OF THE FOURTH TYPE

a, Length 3⅛ inches (No. 220,630). *b*, Length 4⅝ inches (No. 220,619). *c*, Length 8 inches (No. 16,991).

Side view, width 7¼ inches.

Face view, length 7¼ inches.

ELBOW STONES

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